

CLAIMS

What is claimed is:

1. A compacted resource file structure for storing one or more resource files within a single file structure, the compacted resource file structure comprising:
a compacted resource file header, the compacted resource file header comprising a compacted resource file signature, a compacted resource file size, and a compacted resource file amount which specifies the number of resources compacted into the compacted resource file structure;
one or more resource headers, the resource headers comprising a resource version, a resource checksum, and a resource size; and
one or more resources corresponding to the one or more resource headers.
2. The compacted resource file structure of claim 1, wherein the compacted resource file structure further comprises padding preceding the one or more resources.
3. The compacted resource file structure of claim 1, wherein the compacted resource file header further comprises memory offset information for the one or more resources.
4. The compacted resource file structure of claim 1, wherein the one or more resource file headers further comprise memory offset information for the corresponding one or more resources.

5. The compacted resource file structure of claim 1, wherein the one or more resources comprise a data checksum.
6. The compacted resource file structure of claim 1, wherein the one or more resources comprise a resource block signature.
7. A computer-readable medium having computer-executable instructions for creating at least one compacted resource file, the computer-executable instructions comprising instructions for:
 - reading a control file, wherein the control file specifies at least one compacted resource file and one or more resource files that are to be compacted into the at least one compacted resource file;
 - reading the one or more resource files that are to be compacted into the at least one compacted resource file, wherein the reading the one or more resource files comprises reading header information from the one or more resource files and reading resource information from the one or more resource files;
 - storing the header information from the one or more resource files into one or more resource headers in the at least one compacted resource file;
 - storing the resource information from the one or more resource files into one or more resources in the at least one compacted resource file;

creating a compacted resource file header for each of the at least one compacted resource file, wherein the compacted resource file header corresponds to the resource headers and the resources in the at least one compacted resource file; and storing the compacted resource file header with the corresponding at least one compacted resource file.

8. The computer-readable medium of claim 7, wherein the computer-executable instructions for creating the at least one compacted resource file further comprise instructions for determining a memory offset for the one or more resources in the at least one compacted resource file and storing the memory offset for the one or more resources in the compacted resource file header.
9. The computer-readable medium of claim 7, wherein the computer-executable instructions for creating the at least one compacted resource file further comprise instructions for determining a memory offset for the one or more resources in the at least one compacted resource file and storing the memory offset for the one or more resources in the one or more resource headers in the at least one compacted resource file, the one or more resource headers corresponding to the one or more resources.
10. The computer-readable medium of claim 7, wherein the computer-executable instructions for creating the at least one compacted resource file further comprise

instructions for storing padding preceding the resources in the at least one compacted resource file.

11. The computer-readable medium of claim 7, wherein the control file is in a text format.
12. The computer-readable medium of claim 7, wherein the computer-executable instructions for creating the at least one compacted resource file further comprise instructions for terminating creation of the at least one compacted resource file if the control file does not specify at least one compacted resource file.
13. The computer-readable medium of claim 7, wherein the one or more resource files that are to be compacted into the at least one compacted resource file are selected so that the at least one compacted resource file is sized to be a multiple of a minimum memory allocation segment.
14. The computer-readable medium of claim 7, wherein the one or more resource files that are to be compacted into the at least one compacted resource file are language dependent resource files comprising language dependent resources.
15. The computer-readable medium of claim 14, wherein the one or more resource files that are to be compacted into the at least one compacted resource file are selected so that language dependent resources of the same language and

corresponding to related language specific components are compacted into the same compacted resource file.

16. A computer-readable medium having computer-executable instructions for loading a requested resource, the computer-executable instructions comprising instructions for:
 - obtaining a name and a path for a file comprising the requested resource;
 - obtaining identifying information for the requested resource;
 - determining whether the file comprising the requested resource is a compacted resource file;
 - obtaining, if the file comprising the requested resource is the compacted resource file, a memory offset for the requested resource within the compacted resource file;
 - locating, if the file comprising the requested resource is the compacted resource file, a located resource at the memory offset within the compacted resource file;
 - comparing the identifying information for the requested resource to an identifying information for the located resource; and
 - mapping the located resource into a requesting process address space if the identifying information for the requested resource matches the identifying information for the located resource.
17. The computer-readable medium of claim 16, wherein the computer-executable instructions further comprise instructions for:

determining, if the file comprising the requested resource is the compacted resource file, whether the compacted resource file is already loaded by another process; and

memory mapping the compacted resource file across running processes, if the file comprising the requested resource is the compacted resource file and if the compacted resource file is not already loaded by another process.

18. The computer-readable medium of claim 16, wherein the computer-executable instructions further comprise instructions for maintaining, if the file comprising the requested resource is the compacted resource file, a usage counter, wherein the usage counter tracks the number of processes currently using the compacted resource file.
19. The computer-readable medium of claim 16, wherein the determining whether the file comprising the requested resource is the compacted resource file comprises referencing the name for the file comprising the requested resource.
20. The computer-readable medium of claim 16, wherein the identifying information for the requested resource comprises a version information of the requested resource and a checksum referencing the requested resource; and wherein the identifying information for the located resource comprises a version information of the located resource and a checksum referencing the located resource.

21. A method for combining language dependent resource files into a compacted resource file, wherein the language dependent resource files contain language specific resources used by language neutral components, and wherein the language neutral components are associated with the language dependent resource files, the method comprising the steps of:

identifying a related set of language neutral components that are generally used as part of a common user operation;

identifying a related set of language dependent resource files comprising language dependent resource files associated with language neutral components from the related set of language neutral components; and

combining the related set of language dependent resource files into the compacted resource file.
22. The method of claim 21, wherein the identifying a related set of language dependent resource files comprises identifying the related set of language dependent resource files to only include language dependent resource files comprising language dependent resources of a single language.
23. The method of claim 21, wherein the combining the related set of language dependent resource files into the compacted resource file comprises combining the related set of language dependent resource files so that a memory size of the compacted resource file is a multiple of a minimum memory allocation segment,

wherein the minimum memory allocation segment is the size of the smallest segment of memory reserved when a file is loaded into memory.

24. The method of claim 21, wherein combining the related set of language dependent resource files into the compacted resource file comprises combining all of the language dependent resource files into the compacted resource file.